

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016516**Date Inspected:** 25-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

**BAY#10**

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 10 located on North tower Lift-5 Grillage Assembly NSD1 – TL5 – 3B/F. Welder is identified as 066422. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U4c.

Weld joint # 18 located on South tower Lift-5 Grillage Assembly SSD1 – TL5 – 1B/F. Welder is identified as 052930. ZPMC Quality Control (QC) Inspector is identified as Yuan Hui Gang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U4c.

Weld joint # 21A located on North tower Lift-5 Grillage Assembly NSD1 – TL5 – 3B/F. Welder is identified as 070006. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U5b.

Fluxcored Arc Welding (FCAW):

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## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

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Weld joint # 13 located on Façade Seal Angle SD1 – SFSA4 – 154. Welder is identified as 053116. ZPMC Quality Control (QC) Inspector is identified as Jiang Xiao Bo. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

### BAY#11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 04 located on West tower Lift-5 Grillage Assembly WSD1 – TL5 – 4B/F. Welder is identified as 037932. ZPMC Quality Control (QC) Inspector is identified as Mao Bin Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC –U4c.

### ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11

This QA Inspector observed the following work in progress

Submerged Arc Welding (SAW):

Weld joint # 37 located on Bottom plate BP30392 – 001. Welder is identified as 044550. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

### BAY#12

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the Caltrans Quality Assurance (QA) in-process observations of the fabrication of Light Bracket, this QA Inspector discovered the following issues:

- Wrapped fillet welds around the ends of the gussets inside 6 Light Brackets.

- Stiffeners' snipes were closed by welding.

- The affected members are identified as follows:

- 1) LB3-001, wrapped welds#1~36; 38~41; 47~50; 52~55; 63~74; 76~91. Closed stiffeners' snipes on gussets (X335G; X335H; X335J).

- 2) LB3-002, wrapped welds#1~36; 38~41; 47~50; 52~55; 63~74; 76~91. Closed stiffeners' snipes on gussets (X335G; X335H; X335J).

- 3) LB3-003, wrapped welds#63~74.

- 4) LB4-001, wrapped welds#1~36; 38~41; 47~50; 52~55; 63~74; 76~91. Closed stiffeners' snipes on gussets (X335G; X335H; X335J).

- 5) LB4-002, wrapped welds#1~8; 10~12; 14~24; 47~50; 52~55; 63~74; 76~91. Closed stiffeners' snipes on gussets (X335G; X335H; X335J).

- 6) LB4-003, wrapped welds#63~74.

- Side Plates (X336A and X336B) were fabricated with copes not shown in the approved shop drawings.

Subsequently, new welds were introduced to weld the copes.

Applicable reference:

ABF-RFI-001786R00 dated June 12, 2009: "...terminate welds in accordance with the contract plans and the

# WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

approved shop drawings.”

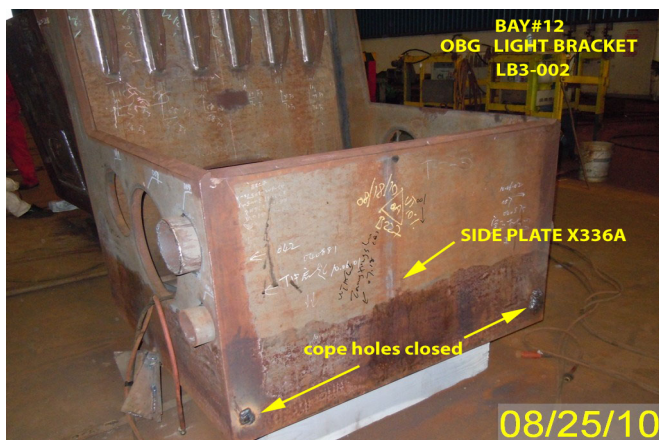
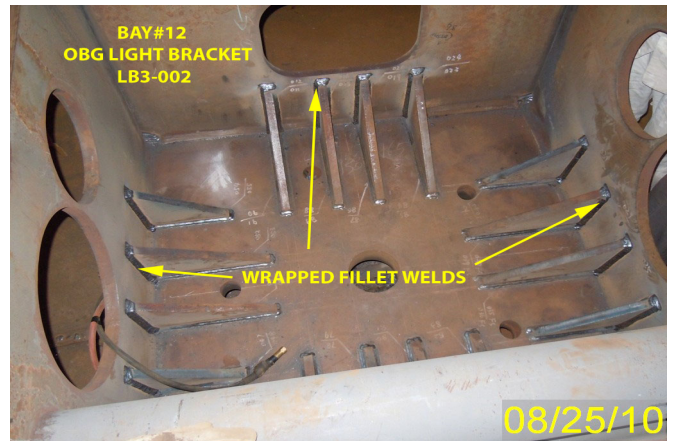
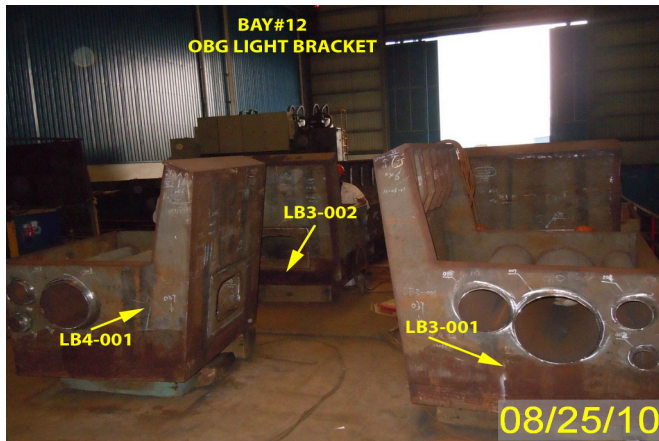
ABF-RFI-001178R00 dated 2/7/08: “Regarding fillet weld termination, ZPMC will only do wrap-around-corner or hold-back a certain distance whenever such detail is called out on shop drawings. Otherwise, we will continue the fillet welds to the end of connecting members or the edge of rathole opening as stated in the response to ABF-RFI-001105R00.”

Approved Shop Drawings: LB3A; LB4A

This QA notified ZPMC QC identified as Mr. Zhao Jian Hang and ABF inspector identified as Mr. Peter Ferguson of the above issue and that an incident report will be generated.

For further information see below pictures:-

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

No Relevant Conversations.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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## WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

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remedial efforts please contact Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Kumar,Sandeep	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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